## IN THE CLAIMS

**Amendments to the Specification:**

Please replace paragraph beginning on page 9, line 20 with the following rewritten paragraph:

In one embodiment, each CIC 220 can decompress any or all of three data types: Continuous Tone (CT), Linework (LW), or Linework control (LWC). The CICs 220 assigned to decompress LW and LWC data perform a lossless decompression of the compressed stream of LW and LWC data, while the CICs 220 assigned to decompress the CT data may perform a lossy decompression of the compressed stream of CT print data. The decompressed data is then transmitted via print head signals 216 to feed the print heads 112 of Figure 1. The print head signals 216 preferably transmit various types of decompressed data from the CICs 220. For example, continuous tone (CT) data, ~~line work~~ linework (LW) data and ~~line work~~ linework control (LWC) data are transmitted as bit maps through the print head signals 216. When the print engine 108 receives a print head signal 216, the signal may contain any or all of the three data types merged together.

Please replace paragraph beginning on page 13, line 19 with the following rewritten paragraph:

Once the appropriate FIFO 316, 318, or 320 has been enabled, the handshaking control module 307 determines which bus to place the data on. If the data is Linework or Linework Control data, it may be placed on either of the LW/LWC buses 326 and 327, according to which bus the ~~bus control~~ data processing module 306 requested the data to be transmitted across. The data processing module 306 controls which bus 326, 327 the data is transmitted across. If both LW/LWC buses 326 and 327 are not busy, the data processing module 306 arbitrarily chooses one of the LW/LWC buses 326 and 327 to use. Of course,

a standard procedure such as an alternating scheme could also be used to select which of the buses 326, 327 to place the data on when both buses are not busy. The LW/LWC data is then transmitted to the data processing module 306 via the transmission paths 334a or 334b.

Please replace paragraph beginning on page 15, line 9 with the following rewritten paragraph:

The present invention provides advantages over the prior art. These advantages result from the fact that the memory components within the memory card 303 of Figure 3 are capable of operating at a rate twice as fast as the decompressors 356, 358, 360 of Figure 4. In addition, typical print jobs tend to involve either large amounts of linework ~~data (LWD)~~ (LW) data and small amounts of linework control (LWC) data ~~(LWC data)~~ or vice-versa, but generally not equal amounts of both types of data.

Please replace paragraph beginning on page 15, line 15 with the following rewritten paragraph:

In prior art printers, a data processing module (such as the data processing module 306) might request an object X of ~~LWD~~ LW data (for example) from the handshake control module 307. Even though the LWC decompressor and corresponding interface circuitry is capable of simultaneously requesting and receiving LWC data, this would not occur under the prior art because the job consisted primarily of ~~LWD~~ LW data. Therefore, the memory would sit and wait for the ~~LWD~~ LW decompressor and interface circuitry to process the current data and request additional data, while the LWC decompressor sat idle. A similar situation existed for jobs that consisted primarily of LWC data. In such jobs, the ~~LWD~~ LW decompressor sat idle for large amounts of time.

Please replace paragraph beginning on page 16, line 1 with the following rewritten paragraph:

Under the present invention, the data processing module 306 may now request and receive a plurality of objects of the same type simultaneously. For example, the data processing module 306 may request an object X of ~~LWD~~ LW data and an object Y of ~~LWD~~ LW data more or less simultaneously from the ~~memory system~~ handshake control module 307. The object Y request would in one example under embodiments of the present invention specify the LWC bus 326. The memory system 303 would then start extracting data from the ~~LWD~~ LW memory 310 and steer the object X data to the ~~LWD~~ LW bus 327 and the object Y data to the LWC bus 326. The data would therefore be delivered to the decompressors 350 and 352 at twice the rate as the prior art implementation.

Please replace paragraph beginning on page 16, line 10 with the following rewritten paragraph:

Figure 5 is a schematic flow chart diagram illustrating one embodiment of a process 500 that may be conducted by the CIC 220 of Figure 3 to transmit a plurality of data types over any one of a plurality of available data buses. In the depicted embodiment, the process 500 is in an idle state 502 when printing jobs are not being processed. When the host 102 of Figure 1 initializes a printing job, the CIC 220 of Figure 3 prefetches the data associated with that print job into the memory ~~315~~ 303 of Figure 3 in a step 504. While the data is being prefetched into the memory ~~315~~ 303, the CIC 220 processes the header information of the data to be printed in a step 506. The processing of the headers in the step 506 allows the decompressor 356, 358, and 360 within the data processing module 306 to know the correct manner in which to request the data for decompression from the memory 303. Once the data has been prefetched into the memory 303 in the step 504 and the headers have been processed in the step 506, the data processing module 306 begins to request data to be decompressed in a step 508.

Please replace paragraph beginning on page 17, line 1 with the following rewritten paragraph:

Each request that the data processing module 306 makes is preferably for a specific data type, either Linework (LW), Linework Control (LWC), or continuous tone (CT). The handshaking control module 307 is configured to evaluate the data type requested by the data processing module 306 and enable the appropriate input FIFO 316, 318, and 320 in a step 510. Once the appropriate input FIFO 316, 318, and 320 has been enabled in the step 510, the handshaking control module 307 selects the bus to place the data on in a step 512. If the data requested is CT data, the data is always placed upon the dedicated CT bus 328 in a step 514. However, if either LW or LWC data is requested, either one the LW/LWC buses 326 and 327 may be used to transmit the data. The data processing module 306 evaluates how busy each of the LW/LWC buses 326 and 327 are and requests the data to be transmitted across the least busy bus 326 and 327 in the step 514.

Please replace paragraph beginning on page 17, line 12 with the following rewritten paragraph:

Once the data has been placed upon the appropriate bus in the step 514, it is then transmitted to the data processing module 306 and decompressed by the appropriate decompressor 356, 358, and 360 in a step 516. Once the data has been decompressed in the step 516, it is transmitted to the output FIFOs 324 and 325 in a step 518. The data is held in the ~~input~~ output FIFOs 324 and 325 until all the data for an object has been decompressed and then the data is transmitted to the merge and screen module 308. When the data arrives at the merge and screen module 308, the different types of decompressed data (LW, LWC, and ~~CT~~ CT) are merged together in a step 520. Once the data has been merged together, it is transmitted to the print engine 108 in a step 522.

Please replace paragraph beginning on page 17, line 21 with the following rewritten paragraph:

Throughout the cycle of the data transmission process 500, the handshaking control module 307 monitors the input data stream and input FIFOs 316, 318, and 320 as outlined in the process 600 of Figure 6. When no print jobs are being processed, the handshaking control module 307 is in an idle state as shown in a step 602. When a print job is begun, the data processing module 306 sends a request to the handshaking control module 307 for data based upon the evaluation of the file headers as shown as part of the process 500. The handshaking control module 307 receives the request in a step 604 and requests the image data from the host 102 through the PCI adaptor 301 in a step 606.

Please replace paragraph beginning on page 18, line 6 with the following rewritten paragraph:

As the data requested from the PCI adaptor 301 in the step 606 is being received, the handshaking control module 307 places the data into the correct input FIFO 316, 318, and 320. For example if the data processing module 306 requested Linework data, the handshaking control module 307 would place the Linework data into the FIFO 316 associated with Linework data. As the data stream comes into the CIC 220 from the host 102, the handshaking control module continuously checks to verify that all of the input FIFOs 316, 318, and 320 are not empty in a step 610. Once any one of the input FIFOs 316, 318 or 320 becomes empty, the printing process comes to a halt and the handshaking control module 307 returns to an idle state of the step 602.

Please replace paragraph beginning on page 18, line 15 with the following rewritten paragraph:

If, however, all of the input FIFOs 316, 318, and 320 are not empty, as determined in the step 610, the handshaking control module 307 monitors the fullness of each individual FIFO 316, 318, and 320 in a step 612. When data is received from the PCI adaptor 301 in the step 606 it is directed to the FIFO 316, 318, and 320 that has the least amount of data in the step 614. This process 600 ensures that all of the FIFOs 316, 318, 320 remain full until the end of the print process.